## REMARKS

Claims 1-11 and 22-25 are now pending in the application. Claims 1-7 have been withdrawn. Claims 8-11 have been amended herein. Claims 12-21 have been cancelled. Claims 22-25 have been added herein. Paragraphs [0079], [0084] and [0126] have been amended herein to correct obvious errors. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### SPECIFICATION

The specification stands objected to for having a Title that is not descriptive. However, during the telephone interview with the Examiner on January 13, 2004, the Examiner permitted Applicants to defer amending the title. Accordingly, the title is not amended herein.

### REJECTION UNDER 35 U.S.C. § 102, OR IN THE ALTERNATIVE UNDER 35 U.S.C. § 103

Claims 8 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as unpatentable over Fujii et al. (U.S. Patent No. 5,077,238). This rejection is respectfully traversed.

It is respectfully submitted that Claims 8 and 11 are non-obvious and patentable over the prior art of record. Referring to Claim 8, the claim calls for "a wiring layer provided on and in direct contact with the interlayer dielectric layer, wherein the interlayer dielectric layer includes a first oxide film provided as a lowermost layer . . . a layer containing nitride provided on and in direct contact with the first oxide film, and a second oxide film provided on and in direct contact with the layer containing nitride."

In contrast, the Fujii et al. reference does not disclose such an arrangement for a semiconductor device. Rather, the Fujii et al. reference teaches and discloses: (1) a semiconductor device having an oxide film 19, a nitride film 20 and wiring 13 respectively stacked on top of one another (See Figure 1J of the Fujii et al. reference); (2) a first oxide layer 27, a second oxide layer 19, a nitride layer 20 and wiring 13 respectively stacked on top of one another (See Figures 4G and 5F of the Fujii et al. reference); and (3) a first oxide layer 19, a nitride layer 20, a wiring 13 and a second oxide layer 29 respectively stacked on top of one another (See Figures 6K-6Q and 7A-7F of the Fujii et al. reference). None of these configurations teach or disclose an interlayer dielectric layer having a first oxide film, a layer containing nitride, and a second oxide film respectively positioned on one another with a wiring layer thereon as called for in Claim 8. Furthermore, Applicants' representative can find no motivation to arrive at the semiconductor device as called for. Thus, for at least this reason it is respectfully submitted that the Fujii et al. reference does not teach nor disclose the subject matter of Claim 8 and that Claim 8 is patentable over the prior art of record. Accordingly, withdrawal of the instant rejection is requested.

Claims 9-11 all depend from Claim 8 and, therefore, for at least the reason mentioned above with reference to Claim 8 are also not anticipated nor rendered obvious by the prior art of record. Accordingly, withdrawal of the instant rejection is requested.

Claims 22-25 have been added herein. Claim 22, similarly to Claim 8, calls for "a wiring layer provided on and in direct contact with the interlayer dielectric layer, wherein the interlayer dielectric layer comprises a first oxide film provided as a lowermost layer

. . . a layer containing nitride provided on and in direct contact with the first oxide film, and a second oxide film provided on and in direct contact with the layer containing nitride." It is respectfully submitted that for at least the reasons stated above in reference to the teachings and disclosure of the Fujii et al. reference, Claim 22 is nonobvious and patentable over the prior art of record. New Claims 23-25 all depend from Claim 22 and are therefore also not anticipated nor rendered obvious by the prior art of record. Accordingly, allowance of new Claims 22-25 is respectfully requested.

**REJECTION UNDER 35 U.S.C. § 103(a)**

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujii (U.S. Patent No. 5,077,238) and Wu (U.S. Patent No. 6,008,517). This rejection is respectfully traversed.

Referring to Claims 9 and 10, these claims call for "wherein the first oxide film has a thickness of 10-80nm" and "wherein the first oxide film has a thickness of 30-70nm," respectively. In rejecting these claims, the Office Action relies upon the Wu reference (U.S. Patent No. 6,008,517) as showing that these thicknesses are in common use in similar devices in the art. The Wu reference, however, does not disclose nor teach the forming of an oxide layer having these ranges and used as called for in Claims 9 and 10. Rather, the Wu reference discloses forming silicon oxide layers of specific thicknesses for use in forming a flash memory device. Specifically, the Wu reference discloses the use of a thin silicon oxide layer for inhibiting the FOX growth on an active region of a semiconductor substrate 10 (See column 4, lines 14-20 of the Wu reference), a first oxide layer 16 that serves as a tunneling oxide layer. (See column 4, lines 48-65 of the Wu reference), and a second oxide layer 22 that serves as an

insulation oxide over the junction region 20 (See column 5, lines 15-28 of the Wu reference). All of these various oxide layers are used to form the internal components of the flash memory. The Wu reference, however, does not disclose the use of an oxide film of a specific thickness for use in forming an interlayer dielectric as called for in Claims 9 and 10. In other words, the Wu reference does not disclose nor teach oxide films for use as an interlayer dielectric much less the use of an oxide film having specific thicknesses for use in an interlayer dielectric. Furthermore, because the Wu reference is unconcerned with the interlayer dielectric, one skilled in the art would not look to the Wu reference for teachings associated with oxide film thicknesses to invent the semiconductor device of the present application. Thus, it is respectfully submitted that the Wu reference does not provide any teachings nor motivation to one skilled in the art to form an interlayer dielectric with an oxide film having the thicknesses called for in Claims 9 and 10.

Additionally, the thicknesses of the oxide film called for in Claims 9 and 10 have been discovered to produce advantageous results. Specifically, referring to Experimental Example 2 in the present application (See paragraphs [0123] to [0127] in the present application), the inventors have discovered that by forming the oxide film with the specific dimensions provides an oxide film that: (1) inhibits the amount of change in the threshold voltage on the control gate; and (2) stabilizes the memory characteristics while the rewriteable number required for a memory can be maintained. Thus, the characteristics required in view of the rewriteable number can be maintained, and the memory characteristic can be stabilized while inhibiting amounts of change in the threshold voltage on the control gate by using an oxide film having a thickness in the

ranges called for in Claims 9 and 10. Thus, it is respectfully submitted that these ranges are critical, provide advantages over the prior art, and are not taught nor disclosed in the prior art of record. Accordingly, withdrawal of the instant rejection is requested.

**CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants' representative therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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